COMMITEE DISCUSSION

Offshore Special Regulation

Calculating Cockpit Volume

Proposal

To review the current position.

Current Position

It is unclear how to calculate cockpit volume in the offshore special regulations. The following is a recent exchange of correspondence with a yacht designer who wanted clarification on the rule:

“Does this applies to an open transom? Or would the volume of an open transom necessarily be zero?

Below is my interpretation could you please advise if it is correct or not?

My interpretation of measured cockpit volume is as follows:

3.09.7 Cockpit Volume (april 1992 and after)

The total volume of all cockpits below lowest coaming shall not exceed 6% (LWL x maximum beam x freeboard abreast the cockpit)

The "lowest coamings" shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume

Definitions as per ISAF:

Coaming:

includes the transverse after limit of the cockpit over which water would run in the event that when the yacht is floating level the cockpit is flooded or filled to overflowing.

FA station:

The transverse station at which the upper corner of the transom meets the sheerline.

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In the description of Cockpit volume, the important note is “below lowest coaming” this means that no volume above this lowest coaming need to be taken into account, thus we can take a plane parallel to the DWL at a height of the “lowest coaming” and use that as the upper boundary for our measured cockpit volume.”
The following is the response given by the Secretariat which conveys the current situation

In response to your e-mail I have looked into the history of this as the questions has been asked before. The cockpit volume of the boat is not zero as you suggest this is because the Committee did not accept the logic used to come to this conclusion. The two submissions attached were both rejected by the Special Regulations Sub-committee, as in 2006 it was rejected that the volume was zero, and in 2007 again a submission that a quick draining cockpit was zero was also rejected. Below are the minutes concerning this issue:

**Minutes November 2006**

OSR 3.09.7 - Cockpit Volume

Submission SR2 - 06 from the Chairman of the International Regulations Commission was reviewed

Recommendations to the Offshore Committees: **Reject**

There was concern that accepting the submission could encourage large, America’s Cup Class-style, cockpits. The OSR requirements for cockpit drainage when heeled should be reviewed with the ISO standards for the next OSR edition.

**Minutes November 2007**

OSR 3.08.3 – Cockpit Volumes

Submission SR36-07 was received from the Chairman of the Offshore Committee

Recommendation to the Offshore Committee: Reject

Offshore Committee Decision: **Defer**

**Minutes November 2008**

OSR 3.08.3 – Cockpit Volumes

Submission SR36-07 was received from the Chairman of the Offshore Committee. Although there was a wish that the Special Regulations should not be type-forming in design, representatives of the TP 52 Class and the IRC Rating Rule advised that new racing designs would go for significantly larger cockpits if this submission was approved.

Recommendation to the Offshore Committee: **Reject**

Offshore Committee Decision: **Reject**

I would be happy to take any further questions you have on this subject to the Committee at the annual conference as it is something that needs to be looked at again.”

Below are the two submissions referred to in this response.
OFFSHORE SPECIAL REGULATIONS

OSR 3.09.7 Cockpit Volume Table

A submission from the Chairman, International Regulations Commission

Proposal:
To insert under the heading “3.09.7 Cockpit Volume” the words:

“Cockpits opening aft to the sea need not comply with table 5”

Current Position:
Table 5 defines cockpit volume criteria which in effect do not apply to cockpits open aft to the sea.

Reason:
The proposed introductory statement makes clear without further study that Table 5 is not intended to apply to cockpits open aft to the sea.
OFFSHORE SPECIAL REGULATIONS – 3.09.7

Cockpit Volume Table

A submission from the Chairman of the Offshore Committee

Proposition 1
Add a note to the bottom of table 5:

“In cockpits opening aft to the sea that are entirely self draining at all angles of heel via the transom opening (except for any wheel well in the cockpit sole) and with an area opening aft greater than 50% maximum cockpit depth x maximum cockpit width then there are no limits on the cockpit volume”

Current Position:

<table>
<thead>
<tr>
<th>3.09</th>
<th>Cockpits - Attention is Drawn to ISO 11812</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.09.1</td>
<td>Cockpits shall be structurally strong, self-draining quickly by gravity at all angles of heel and permanently incorporated as an integral part of the hull.</td>
</tr>
<tr>
<td>3.09.2</td>
<td>Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured</td>
</tr>
<tr>
<td>3.09.3</td>
<td>A bilge pump outlet pipe shall not be connected to a cockpit drain. See OSR 3.09.8 for cockpit drain minimum sizes</td>
</tr>
<tr>
<td>3.09.4</td>
<td>A cockpit sole shall be at least 2% LWL above LDWL (or in IMS yachts first launched before 1/03, at least 2% L above LWL)</td>
</tr>
<tr>
<td>3.09.5</td>
<td>A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09</td>
</tr>
<tr>
<td>3.09.6</td>
<td>In cockpits opening aft to the sea structural openings aft shall be not less in area than 50% maximum cockpit depth x maximum cockpit width.</td>
</tr>
<tr>
<td>3.09.7</td>
<td>Cockpit Volume</td>
</tr>
</tbody>
</table>

TABLE 5

<table>
<thead>
<tr>
<th>earliest of age or series date</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Timeframe</td>
<td>Volume Calculation</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------</td>
</tr>
<tr>
<td>before 4/92</td>
<td>the total volume of all cockpits below lowest coamings shall not exceed 6% ((\text{LWL} \times \text{maximum beam} \times \text{freeboard abreast the cockpit})).</td>
</tr>
<tr>
<td>before 4/92</td>
<td>the total volume of all cockpits below lowest coamings shall not exceed 9% ((\text{LWL} \times \text{maximum beam} \times \text{freeboard abreast the cockpit})).</td>
</tr>
<tr>
<td>4/92 and after</td>
<td>as above for the appropriate category except that &quot;lowest coamings&quot; shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume.</td>
</tr>
</tbody>
</table>

**Note**

IMS-rated boats may instead of the terms \(\text{LWL}, \text{maximum beam}, \text{freeboard abreast the cockpit}\), use the IMS terms \(L, B\) and \(FA\). **

Table 5 defines cockpit volume criteria which in effect do not apply to cockpits open aft to the sea.

**Reason:**

It is a common miss conception that modern race boat style cockpits such as those on TP52’s Farr 40 etc. can be assumed to have no cockpit volume and therefore exempt from this requirement. This appears from the wording not to be the case. The physical process of calculating cockpit volume on these boats is not clearly defined and is very problematic. Submission SR2-06 from the Chairman of the International Regulation Commission attempted to address this issue but the proposal was rejected due to concerns the solution was too open in it’s approach and could lead to undesirable effective “open style” day boats. The wording maintains the current minimum drainage area and requires a genuinely self draining cockpit while with 3.09.4 specifies the minimum sole height above LWL.